

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF PENNSYLVANIA**

LAMBETH MAGNETIC STRUCTURES,
LLC,

Plaintiff,

v.

WESTERN DIGITAL CORPORATION,
WESTERN DIGITAL TECHNOLOGIES, INC.,
WESTERN DIGITAL (FREMONT), LLC,
WESTERN DIGITAL (THAILAND)
COMPANY LIMITED, WESTERN DIGITAL
(MALAYSIA) SDN.BHD, and HGST, INC.,

Defendants.

) Civil Action No. 2:16-cv-00541-CB

) Judge Cathy Bissoon

REDACTED

**BRIEF IN SUPPORT OF PLAINTIFF LAMBETH MAGNETIC STRUCTURES, LLC'S
MOTION FOR SUMMARY JUDGMENT**

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Plaintiff Lambeth Magnetic Structures, LLC (“Plaintiff” or “LMS”) moves for partial summary judgment on several Defendants Western Digital Corporation, Western Digital Technologies, Inc., Western Digital (Fremont), LLC, Western Digital (Thailand) Company Limited, Western Digital (Malaysia) SDN.BHD, and HGST, Inc.’s (collectively, “Western Digital”) affirmative defenses. Specifically, LMS seeks partial summary judgment in its favor on Western Digital’s Third Affirmative Defense (Invalidity of the ’988 Patent) as to 35 U.S.C. §§ 102, 103, and 116, and summary judgment on Western Digital’s Tenth (Express or Implied License), Twelfth (Uncorrectability of Inventorship for the ’988 Patent), Thirteenth (Lack of Standing), Fourteenth (Laches) and Fifteenth (Unclean Hands) Affirmative Defenses.

I. INTRODUCTION

Plaintiff LMS asserts that Western Digital infringes United States Patent No. 7,128,988 (“the ’988 Patent”) by making, using and selling hard drives that include the novel magnetic structure claimed in the ’988 Patent. LMS’s infringement proof is comprised of extensive reverse engineering establishing that hundreds of Western Digital products practice the ’988 Patent. In response to this extensive proof, Western Digital primarily attempts (but fails) to poke holes in LMS’s extensive reverse engineering evidence, coming forward with few, if any, affirmative noninfringement arguments.

As to invalidity, Western Digital advances anticipation and obviousness arguments that are facially flawed. Western Digital’s primary defenses appear to be the fact-intensive defenses of patent eligibility, written description, and enablement, each of which is heavily contested by LMS. Western Digital also advances a plethora of defenses that attempt to limit or avoid its exposure for infringement of LMS’s novel and critical technology, including, for example, unclean hands, license, and other similar defenses. But although Western Digital has pleaded these defenses, it has failed to come forward with any evidence in discovery to support them.

Hence, partial summary judgment on each of Western Digital's challenged affirmative defenses should be granted as set forth herein.

II. LEGAL STANDARDS

A. Summary Judgment

"Summary judgment is appropriate in a patent case, as in all other cases, when it is apparent from the entire record, viewed in the light most favorable to the non-moving party, that there are no genuine issues of material fact." *Judkins v. HT Window Fashions Corp.*, 624 F. Supp. 2d 427, 434 (W.D. Pa. 2009). Summary judgment should be entered against a party "who fails to make a sufficient showing to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial." *Id.* (citing and quoting *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986)). In deciding a summary judgment motion, a court must "view the evidence presented through the prism of the substantive evidentiary burden." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 254 (1986).

This motion challenges many of Western Digital's affirmative defenses; Western Digital has the burden of proof on these defenses. "The burden of establishing an affirmative defense is on the party raising the defense." *Jazz Photo Corp. v. Int'l Trade Comm'n*, 264 F.3d 1094, 1102 (Fed. Cir. 2001), abrogated on other grounds by *Impression Prods., Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523 (2017). Further, in the absence of evidence supporting these defenses, LMS is entitled to summary judgment. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986) ("[t]he plain language of Rule 56(c) mandates the entry of summary judgment . . . against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial.>").

B. Invalidity

Invalidity of a patent claim must be proven by clear and convincing evidence. *Sciele Pharma Inc. v. Lupin Ltd.*, 684 F.3d 1253, 1260 (Fed. Cir. 2012). Additionally, the factual predicates for an invalidity assertion must be established by clear and convincing evidence. *See Checkpoint Sys., Inc. v. U.S. Int’l Trade Comm’n*, 54 F.3d 756, 761 n.5 (Fed. Cir. 1995) (concluding that the party asserting invalidity “bore the burden of establishing, by clear and convincing evidence, facts which support the ultimate legal conclusion of invalidity”).

III. ARGUMENT

Western Digital has failed to adduce sufficient evidence to meet its burden of proof with respect to any of its affirmative defenses addressed herein, and thus LMS is entitled to summary judgment on each.

A. LMS Is Entitled to Summary Judgment on Western Digital’s 35 U.S.C. §§ 102 and 103 Defenses

Under 35 U.S.C. § 102, a claim is anticipated only if each claim limitation is disclosed in a single prior art reference, arranged as in the claim. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). In order to demonstrate anticipation, the proponent must show “that the four corners of a single, prior art document describe every element of the claimed invention.” *Id.* (quoting *Xerox Corp. v. 3Com Corp.*, 458 F.3d 1310, 1322 (Fed.Cir.2006)); *see also Nextec Applications v. Brookwood Companies, Inc.*, 703 F. Supp. 2d 390, 425 (S.D.N.Y. 2010), *aff’d sub nom, Nextec Applications, Inc. v. Brookwood Companies, Inc.*, 542 F. App’x 995 (Fed. Cir. 2013) (granting summary judgment of no anticipation because the prior art references did not disclose each element of the asserted claims).

Under 35 U.S.C. § 103, to establish obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *See CFMT, Inc. v. Yieldup Int’l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Royka*, 490 F.2d 981, 985 (CCPA 1974); *see also*

Asetek Danmark A/S v. CMI USA, Inc., 100 F. Supp. 3d 871, 886 (N.D. Cal. 2015) (finding no obviousness because the prior art references “do not teach, disclose, or suggest each and every limitation of the asserted claims”).

Western Digital offered one expert, Dr. Mark Kryder, in support of its claim that certain references anticipate or render obvious the asserted claims of the '988 Patent. Dr. Kryder opined that various references anticipate or render obvious the asserted claims of the '988 Patent. But Dr. Kryder's opinions fail as a matter of law because Dr. Kryder failed to show that at least one element of each asserted claim is present in the asserted prior art references, a defect that Western Digital cannot cure. Dr. Kryder did not even attempt to show that any of Western Digital's asserted 102 or 103 references meet the “uniaxial” requirement that is present in every asserted claim according to the Court's Claim Construction. Because Western Digital has failed to provide expert testimony that its prior art references meet this limitation of the asserted claims, LMS is entitled to summary judgment on Western Digital's anticipation and obviousness defenses.

The Court construed “uniaxial” to mean “having an anisotropy energy density function with only a single maximum and a single minimum as the magnetization angle is rotated by 180 degrees from a physical axis.” Dkt. 88 at 14. Dr. Kryder did not calculate, cite, graph, or otherwise depict an energy density function for any of Western Digital's alleged prior art – let alone show that any of the references have an anisotropy energy density function that meets the requirements of the Court's construction—in his expert report. CSMF¹ at ¶4; App. Ex. A. LMS's expert on validity and infringement, Dr. Kevin Coffey, pointed out this failure in his responsive report for each asserted prior art reference. CSMF at ¶6; App. Ex. B at ¶¶ 283, 286,

¹ Plaintiff's Concise Statement of Material Facts (“CSMF”) is incorporated herein.

324, 347, 367 and 396. Dr. Kryder's Reply Report does not dispute the absence of an anisotropy energy density function for each asserted reference, but instead refers to other information (that is not an energy density function) which he alleges demonstrates that "uniaxial" is met by the references. *See Generally* App. Ex. C. But this proof fails as a matter of law.

In fact, Dr. Kryder admitted that he does not have any data and has not measured the GMR 6 product to determine whether it meets even the *lower standard* that it is more likely than not uniaxial. Western Digital purchased 50 of the allegedly anticipatory (disputed in further detail below) GMR 6 chips. CSMF at ¶11; App. Ex. K. Western Digital's experts reverse engineered only one of those (CSMF at ¶6; App. Ex. M), and yet did not collect data to calculate the energy density function:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Having admitted that he did nothing to analyze the "uniaxial" limitation, Dr. Kryder's bare conjecture is insufficient to raise a disputed question of fact.

² Dr. Sinclair, another Western Digital expert, reverse engineered the GMR 6 chip, one the prior art references on which Dr. Kryder relies; he did not, however, opine that the GMR 6 invalidates any asserted claim.

Western Digital's failure of proof is the same with regard to all its other Section 102 and 103 references; Dr. Kryder did not calculate an energy density function because he did not have the data to do so. Moreover, Dr. Kryder admitted that he made no effort to show by clear and convincing evidence that the asserted Section 102 and 103 references meet the uniaxial (or other) limitations. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED] Thus, Dr. Kryder has admitted that he failed to show that the uniaxial limitation (and other limitations) was present by clear and convincing evidence.

But, in any event, Dr. Kryder's proof is not commensurate with LMS's proof of infringement. [REDACTED]

Dr. Kryder did not. Dr. Kryder acknowledges both that infringement is a lower burden of proof and that he did not provide anisotropy energy density function calculations for the asserted prior art in his expert reports. Thus, because Western Digital has not and cannot come forward with clear and convincing evidence that any of its asserted 102 or 103 prior art references meet the “uniaxial” requirement of the asserted claims, LMS is entitled to summary judgment on Western Digital’s anticipation and obviousness defenses.

B. LMS Is Entitled to Summary Judgment that Siemens GMR 6 Does Not Invalidate the ’988 Patent Under 35 U.S.C. §§ 102(a), 102(b), and/or 102(g)

Western Digital fails to prove by clear and convincing evidence that the Siemens Giant Magneto Resistor 6 (“Siemens GMR 6”) invalidates the ’988 Patent under 35 U.S.C. §§ 102(a), 102(b), and/or 102(g).

In relevant part, 35 U.S.C. § 102 states that a person shall be entitled to a patent unless:

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or ...
- (g) ... (2) before the applicant’s invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it ... 35 U.S.C. § 102.

Under Section 102(a) and 102(g), the relevant date is the “date of invention.” “[I]f the invention was known to or used by others in this country before the date of the patentee’s invention, the later inventor has not contributed to the store of knowledge, and has no entitlement to a patent.” *Woodland Tr. v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1370 (Fed. Cir. 1998). Thus, “in order to invalidate a patent based on prior knowledge or use, that knowledge or use

must have been available to the public.” *Id.* With respect to devices, the knowledge or use required by § 102(a) is public knowledge of a complete and operative device. *Johnson & Johnson v. W. L. Gore & Assocs., Inc.*, 436 F. Supp. 704, 711 (D. Del. 1977). To prove invalidity pursuant to § 102(g), the accused infringer must prove that the invention “has been made [in this country] by another, prior inventor who has not abandoned, suppressed, or concealed it” prior to the inventor’s invention thereof. *Apotex USA, Inc. v. Merck & Co.*, 254 F.3d 1031, 1035 (Fed. Cir. 2001).

To trigger the on-sale bar under Section 102(b), the alleged infringer must prove that the product sold or offered for sale more than one year before the filing date “fully anticipated the claimed invention or would have rendered the claimed invention obvious by its addition to the prior art.” *Allen Eng. Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1352 (Fed. Cir. 2002) (internal citations omitted). Only an offer which rises to the level of a commercial offer for sale, one which the other party could make into a binding contract by simple acceptance, assuming consideration, constitutes an “offer for sale” rendering a patent invalid under the on-sale bar. *Grp. One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1048 (Fed. Cir. 2001). “Mere advertising and promoting of a product may be nothing more than an invitation for offers, while responding to such an invitation may itself be an offer.” *Id.* Dissemination of advertising materials and other information such as preliminary data sheets and newsletters does not constitute a commercial offer for sale, “but rather la[ys] the necessary groundwork for future offers.” *Linear Tech. Corp. v. Micrel, Inc.*, 275 F.3d 1040, 1050 (Fed. Cir. 2001). “In the absence of a clear indication to the contrary, the communications between the [] sales representatives and the customers must be regarded as merely preliminary negotiations at most designed to enable customers to submit offers to buy.” *Id.* “[M]ere publication of preliminary data sheets and promotional information for the [product] communicates nothing to customers

about [the seller's] intent, and thus cannot be an offer for sale.” *Id.* Such activities only indicate preparation to place the product on sale and cannot give rise to an on-sale bar. *Id.*

In this case, the provisional application for the '988 Patent was filed on August 29, 2001. LMS is at least entitled to an invention date of August 29, 2001. App. Ex. A at ¶ 180. LMS claims a conception date of April of 2000. App. Ex. E at 3. Thus, to prove invalidity pursuant to Sections 102(a) and (g), Western Digital must prove that the Siemens GMR 6 predates either April 2000 or August 2001 by clear and convincing evidence. For Section 102(b), Western Digital must prove by clear and convincing evidence that the GMR 6 was on sale in the United States before August 29, 2000. Western Digital cannot prove that GMR 6 precedes any of these dates.

1. Western Digital's Evidence Is Insufficient to Prove Invalidity

Dr. Kryder, Western Digital's expert, relies on the following documents to attempt to establish that the Siemens GMR 6 was made in the United States before the August 29, 2001 priority date of the '988 patent, or was sold or offered for sale more than one year prior to that:

- a. Siemens Magnetic Sensors, Giant Magneto Resistors, Application Notes dated "10.98" ("Siemens GMR Application Notes"). App. Ex. F.
- b. Infineon GMR S6 Data Sheet dated April 1, 1999 ("Infineon GMR S6 Data Sheet"). App. Ex. G.
- c. Excerpts from Thin Film Magnetoresistive Sensors book, Institute of Physics Publishing, S. Tumanski ("Tumanski") published in 2001. App. Ex. H.
- d. 2-page excerpt from crcpress.com website showing a book titled "Thin Film Magnetoresistive Sensors" by S. Tumanski ("Tumanski 2 Cover Page") available for sale with a published date of June 8, 2001. App. Ex. I.
- e. EE Times Article titled "Siemens names chip spinoff Infineon" ("EE Times Article") published on 3/17/1999. App. Ex. J.

Dr. Kryder also relies on the following documents to provide his opinions regarding the Siemens GMR 6:

- f. Packing Slip for a purchase of a 50 GMRS6/Infineon parts from North Star Micro Electronics LLC (“Packing Slip”), with a purchase date of 10/18/2016. App. Ex. K.
- g. Certificate of Conformance from North Star (“Certificate of Conformance”) dated 10/18/2016. App. Ex. L.
- h. Sample GMR product (“Sample GMR Product”) tested and analyzed by Sinclair, as discussed in his Opening and Reply reports. App. Exs. M and N.

None of these documents provides clear and convincing evidence that the Siemens GMR 6 was made in the United States before the filing date of the ’988 Patent or sold or offered for sale more than a year prior.

The Siemens GMR Application Notes were published in Germany. CSMF ¶13; App. Ex. F at WD233102. The “Ordering Information” page provided in the Siemens GMR Application Notes shows all phone numbers, fax numbers, and addresses in Germany, and none in the United States. *Id.* at ¶14; App. Ex. F at WD233118. And this document only references Siemens locations in the United States when it lists Siemens locations in California and New Jersey as part of Siemens’s “Global PartnerChip for Systems on Silicon.” *Id.* at ¶15; App. Ex. F at WD233119.

The Infineon GMR S6 Data Sheet provides technical information about the GMR S6. CSMF at ¶20; App. Ex. G;

The Tumanski reference states “in 1999 Siemens AG introduced into the market magnetic sensors based on the GMR principle.” CSMF at ¶24; App. Ex. H at WD012666. No information about which market the magnetic sensors were introduced into is provided in the Tumanski reference. Tumanski also states that “not all details of this sensor are published.” *Id.*

The Tumanski 2 Cover Page reference is just a cover page that shows a different publisher than the Tumanski reference. CSMF at ¶29; App. Ex. I.

The EE Times Article states that “Siemens AG today said its semiconductor spinoff will be called Infineon Technologies AG when it is officially formed on April 1[, 1999].” CSMF at ¶33; App. Ex. J at WD233097. There is no mention of the Siemens GMR 6 in the EE Times Article.

The Packing Slip shows that North Star Micro Electronics LLC shipped 50 GMR S6 parts to Latham and Watkins on October 18, 2016. CSMF at ¶36; App. Ex. K.

The Certificate of Conformance states that “North Star Micro Electronics LLC maintains records which will prove these materials are sourced from the correct manufacturer, or wholesale source of the correct manufacturer.” CSMF at ¶38; App. Ex. L.

Thus, no evidence shows that the GMR 6 product allegedly procured in 2016 and later tested by Western Digital’s expert was made or used by others in the United States before the filing date, much less that it was on sale in the United States before August 29, 2000. Additionally, the “evidence” provided by Western Digital undermines their invalidity theory because the product tested appears to have a different structure than is shown or described in any of Western Digital’s proffered publications. Simply put, the testing and analysis performed on the Sample GMR Product demonstrates that the analyzed sample does not match the products described in the GMR Application Notes or the Tumanski reference.

First, the images from the reverse engineering performed on the Sample GMR Product indicate a presence of at least 14 layers with a total thickness of 40nm. CSMF at ¶47; App. Ex. M, Sinclair Opening Report at ¶¶ 34-37. But the GMR Application Notes and Tumanski describe an 11-layer structure with a total thickness of 25 nm. CSMF at ¶48; App. Ex. F at WD233106; App. Ex. H at WD012666. Second, in the analyzed Sample GMR Product it is

undisputed that cobalt (Co) is present at approximately the 13.1 nm and 25.3 nm locations on the horizontal scale. CSMF at ¶50; Ex. M. But no cobalt (Co) is shown at those locations in either the GMR Application Notes or the Tumanski reference, as those locations do not correspond to the three cobalt layers depicted in Western Digital's supporting GMR 6 documentation. *Id.* at ¶52. Simply put, there is cobalt present in the Sample GMR 6 that is unaccounted for in the documentation. Third, the thickness of the individual layers in the Sample GMR Product is not uniform, while the thickness of the individual layers in the GMR Application Notes and Tumanski is. *Id.* at ¶¶ 53-54.

Thus, the product described in the documents on which Western Digital relies to demonstrate sale or offer for sale is not the product which Western Digital's experts analyzed to show that it allegedly contained every claim limitation of the asserted claims.

2. Western Digital Failed To Prove by Clear and Convincing Evidence that Siemens GMR 6 "Was Made" in the United States Before the Filing Date of the '988 Patent

Western Digital provided no evidence that the Siemens GMR 6 was made (or manufactured) in the United States before August 29, 2001, the filing date of the '988 patent.³ None of the documents cited by Dr. Kryder or any other evidence demonstrate the making or manufacturing of the GMR 6 sensors in the United States at any point. Thus, Western Digital cannot prove by clear and convincing evidence that the Siemens GMR 6 qualifies as prior art.

³ LMS believes that the priority date for the '988 Patent should be April 26, 2000, as opposed to the August 29, 2001 date asserted by Western Digital. *See Coffey Rebuttal Report* ¶¶ 270-277, App. Ex. B.

3. Western Digital Failed To Prove by Clear and Convincing Evidence that Siemens GMR 6 “Was Sold” in the United States Before the Critical Date of the ’988 Patent

Western Digital provided no evidence that the Siemens GMR 6 was sold in the United States more than one year before the August 29, 2001 filing date of the ’988 Patent. In fact, the only document in evidence showing a sale of GMR 6 product is a packing slip from North Star Micro Electronics LLC showing a sale of 50 GMR S6 parts to Latham and Watkins, Western Digital’s counsel in this litigation, on October 18, 2016—15 years after the priority date of the ’988 patent. *See* App. Ex. K. Thus, Western Digital has failed to raise a genuine issue of material fact as to whether the Siemens GMR 6 was sold in the United States more than one year prior to the filing date of the ’988 patent, or before the filing date at all.

4. Western Digital Failed To Prove by Clear and Convincing Evidence that Siemens GMR 6 “Was Offered for Sale” in the United States Before the Critical Date of the ’988 Patent

Western Digital failed to prove by clear and convincing evidence that more than one year before the August 29, 2001 filing date (or even before the filing date), the Siemens GMR 6 was the subject of a commercial offer for sale in the United States. *See Pfaff v. Wells Elecs.*, 525 U.S. 55, 67 (1998). None of the documents cited by Dr. Kryder rise to the level of a commercial offer for sale of the Siemens GMR 6 sensor in the United States, “one which the other party could make into a binding contract by simple acceptance.” *Grp. One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1048 (Fed. Cir. 2001).

(1) Siemens GMR Application Notes

Dr. Kryder relies on Siemens Magnetic Sensor Application Notes from October 1998 to allege that there was a commercial offer for sale for the Siemens GMR 6 in the United States. *See* App. Ex. F. However, this document mainly describes technical characteristics of Siemens’ Giant Magneto Resistors and nowhere does it say that any of these GMRs were commercially

offered for sale in the United States. *See Linear Tech. Corp.*, 275 F.3d at 1050 (“Mere publication of preliminary data sheets and promotional information for the [product] communicates nothing to customers about [the seller’s] intent, and thus cannot be an offer for sale.”). The Siemens GMR Application Notes has no pricing information; it states that it was published in Munich, Germany by Siemens AG and all phone numbers, fax numbers, webpages and addresses on the Ordering Information page are in Germany, completely failing to identify any ordering locations in the United States where the Siemens GMR 6 was available for purchase. CSMF at ¶15; App. Ex. F at WD233102; WD233118. Indeed, the only mention of any U.S. location is a single reference to locations in California and New Jersey as part of Siemens’s “Global PartnerChip for Systems on Silicon.” *Id.* at WD233119. Western Digital presented no evidence that one could order products from these locations at the relevant time.

7 Ordering Information

Further information about magnetic sensors (magnetoresistors, Hall sensors) is available from the following sources:

- Data Book Magnetic Sensors
(Order No. B143-H6802-G2-X-7600)
- Product Information Magnetic Sensors
(Order No. B143-H7098-G1-X-7600)
- Data Book Discrete & Power Semiconductors
– Silicon Sensors
(Order No. B132-H6999-X-X-7600)
- Internet: <http://www.siemens.de/semiconductor/products/38/38.htm>
- Product marketing:
e-mail: warner.eberle@siemens-scg.com
fax: +49 941 202-3786

The starter kit "contactless rotary switch with GMR" (Order No. B143-H7261-X-X-7600) is also available at your nearest Siemens representation, in Germany directly from:

Siemens AG
ID-LZF - Semiconductor Book Shop
P.O. Box 2352
D-90713 Fürth-Bislohe
tel. (0911) 654-4224
fax (0911) 654-4238

CSMF at ¶14; App. Ex. F at WD233118.

The "Ordering Information" page (shown above) is the closest this document comes to any evidence of an offer for sale, but as stated in *Linear Tech.*, while advertising and product promotion may be the catalyst for purchasing offers, such communications do not constitute commercial offers, and thus cannot trigger the on-sale bar. 275 F.3d at 1050. On the Ordering Information page there are no details about specific products one could order, the price of the products, the quantity or the delivery method on this page. See *A.K. Stamping Co. v. Instrument Specialties Co.*, 106 F. Supp. 2d 627, 641 (D.N.J. 2000) ("unlike many cases where a pre-critical-date commercial offer was found, there is no evidence before this Court of a purchase order, delivery of a sample, or any promise of future delivery"). In fact, the information on this

page simply directs one that they may order further *information* about the magnetic sensors. *See* App. Ex. F.

Thus, the Siemens GMR Application Notes does not rise to a commercial offer for sale of Siemens GMR 6 in the United States more than one year prior to August 29, 2001.

(2) Infineon GMR S6 Data Sheet

Dr. Kryder next relies on Infineon GMR S6 Data Sheet dated April 1, 1999 to allege a commercial offer for sale. *See* App. Ex. G. This document solely provides technical information about the GMR S6, but nowhere does it say that the GMR was commercially offered for sale in the United States. *See Linear Tech. Corp.*, 275 F.3d at 1050 (“Mere publication of preliminary data sheets and promotional information for the [product] communicates nothing to customers about [the seller’s] intent, and thus cannot be an offer for sale.”).

Thus, the Infineon GMR S6 Data Sheet does not rise to a commercial offer for sale of Siemens GMR 6 more than one year prior to August 29, 2001.

(3) Tumanski Reference

The Tumanski reference is a book published in 2001 about Thin Film Magnetoresistive Sensors. On page 297, the book states that “in 1999 Siemens AG introduced into the market magnetic sensors based on the GMR principle.” CSMF at ¶24; App. Ex. H at WD012666. No additional information about which market the magnetic sensors were introduced into is provided in the reference. The book further states that “not all details of this sensor are published.” *Id.* Due to lack of any specificity and due to lack of any offer which the other party could make into a binding contract, this document does not provide clear and convincing evidence about a

commercial offer for sale of the Siemens GMR 6 in the United States more than one year prior to August 29, 2001.⁴

(4) Article from the EE Times

This document does not provide evidence of any specific commercial offer for sale that would trigger the on-sale bar. There is no mention of the Siemens GMR 6 in the EE Times Article. The EE Times Article merely states that “Siemens AG today said its semiconductor spinoff will be called Infineon Technologies AG when it is officially formed on April 1[, 1999].” *See App. Ex. J.* Thus, the Article from the EE Times does not rise to a commercial offer for sale of Siemens GMR 6 more than one year prior to August 29, 2001.

(5) Other references

Western Digital does not appear to rely on any other references to show commercial offer for sale in the United States more than one year prior to the filing date of the '988 Patent, and none of the other references used by Dr. Kryder in his expert report show commercial offer for sale. The North Star Micro Electronics LLC Packing Slip only shows that 50 GMR S6 parts were shipped to Latham and Watkins on October 18, 2016. *See App. Ex. K.* The Certificate of Conformance dated 10/18/2016 merely states that “North Star Micro Electronics LLC maintains records which will prove these materials are sourced from the correct manufacturer, or wholesale source of the correct manufacturer.” *See App. Ex. L.* In other words, North Star at best represents that the GMR 6 is a GMR 6, but offers no evidence relevant to an on-sale bar analysis.

⁴ Western Digital, in Dr. Kryder’s reply report, also cites to a two-page excerpt from crepress.com website showing a book available for sale entitled “Thin Film Magnetoresistive Sensors” with a published date of June 8, 2001 to allegedly show the publishing date of the first Tumanski reference. CSMF at ¶¶9, 28-31; App. Ex. I. This belatedly provided two-page excerpt was not part of Dr. Kryder’s opening expert report. Nonetheless, it is just a cover page and does not provide any information about the Siemens GMR 6 sensors themselves. Publication of Tumanski does not rise to a commercial offer for sale of the GMR 6 sensors.

Because none of the references cited by Western Digital show commercial offer for sale by clear and convincing evidence, Western Digital has failed to prove that the Siemens GMR 6 was “the subject of a commercial offer for sale” in the United States more than one year prior to August 29, 2001.

5. Western Digital Failed To Prove that the Analyzed Sample GMR Product Corresponds to What Is Described in the Documents on Which It Relies to Establish an On-Sale Date

Western Digital does not allege that any of the GMR documents cited by Dr. Kryder are in and of themselves anticipatory references, nor prior art to the '988 Patent.⁵ Rather, Western Digital only asserts that the GMR 6 Product that its counsel purchased in 2016 (15 years after the priority date of the '988 Patent and thus not itself prior art) includes the structure claimed in the '988 Patent. In turn, Western Digital presents the patchwork of GMR documents in an effort to show that what it tested in 2016 was sold or offered for sale or made in the United States sometime before the filing of the patent.

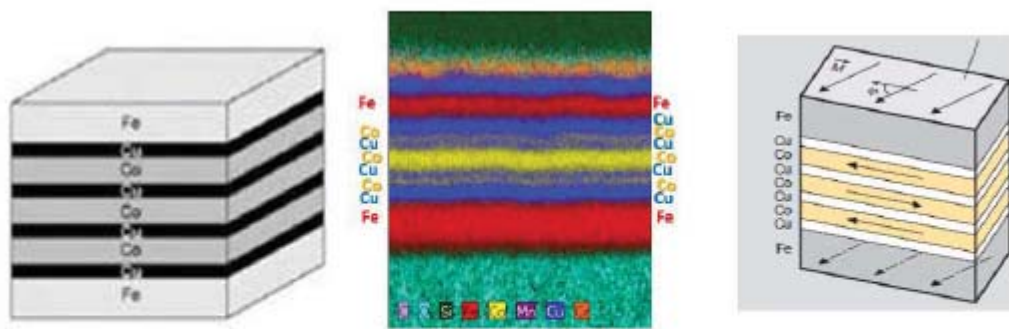
But Western Digital has not shown that the Sample GMR 6 Product it tested and discussed in Dr. Sinclair's report actually corresponds to products discussed in the earlier GMR documents. Indeed, Western Digital's testing undermines its theory.

First, the number of layers and the overall thickness of the structure in the Sample GMR Product analyzed by Western Digital differs from the number of layers and the thickness of the structure discussed in the Siemens GMR Application Notes and Tumanski references. The images from the reverse engineering performed on the Sample GMR Product indicate a presence of at least 14 layers with a total thickness of 40nm. *See* App. Ex. M, Sinclair Opening Report

⁵ These high-level, conceptual documents undisputedly do not show every element of even claim 1 of the '988 patent (e.g., Western Digital's experts do not opine that even the first claim element after the preamble, “a substrate,” can be found in any of the cited documents).

¶¶ 34-37. The Siemens GMR Application Notes and Tumanski describe an 11-layer structure with a total thickness of 25 nm. *See* App. Ex. F at WD233106; App. Ex. H at WD012666. They cannot be the same.

Second, the reverse engineering performed on the Sample GMR Product shows that it does not match the diagrams shown in Figure 2 of the Siemens GMR Application Notes or in the Tumanski reference. *See* App. Ex. F at WD233105; App. Ex. H at WD012666. Below is a figure from Dr. Sinclair’s Opening Report, in which he alleges that the “STEM images for the middle nine-layer section of the GMR S6 conform with the portion of the GMR 6 series layer stack described in the Application Notes and Tumanski.”



(*See* Tumanski at 297; Annotated Precision STEM at Attachment C; GMR Application Notes at Figure 2).

See App. Ex. M, Sinclair Opening Report ¶¶ 38.

However, Dr. Sinclair’s testing and analysis actually demonstrates that the “middle nine-layer section” of the Sample GMR Product *does not* conform with the GMR 6 series layer stack as described in the Siemens GMR Application Notes and Tumanski. Other images generated from the STEM testing done at Dr. Sinclair’s direction show the presence of cobalt in two additional locations in the layer stack that are not depicted or described in the GMR Application Notes and Tumanski (or in Dr. Sinclair’s misleading side-by-side comparison). *See* App. Ex. M, Sinclair Opening Report ¶¶ 32; Attachment C at 4. Both the color composite image of cobalt

isolated and the single line scan graph, which are included in Attachment C to Dr. Sinclair's Report, demonstrate the presence of cobalt next to both the top and bottom iron layers. *Id.* As indicated in the single line scan graph, the additional cobalt is located at approximately 13.1 nm and 25.3 nm on the horizontal scale. *Id.* However, there is no cobalt (Co) shown at those locations in either the Siemens GMR Application Notes or the Tumanski reference. They cannot be the same.

In his reply report, Dr. Sinclair opines that if cobalt layers are included in the layer stack, any "cobalt layer would also present the same growth orientations." *See* App. Ex. N, Sinclair Reply Report at ¶ 15. But that argument is immaterial. The presence of additional Cobalt layers indicates that the tested sample does not match the structure depicted in the Siemens GMR Application Notes and Tumanski references, on which Western Digital relies in its attempt to establish an on-sale date.

Third, the thickness of the individual layers in the Sample GMR Product is not uniform, while the thickness of the individual layers in the Siemens GMR Application Notes and Tumanski is. In the Sample GMR Product, the individual iron (Fe) layers shown in red are of different thicknesses; the individual copper (Cu) layers shown in purple are of different thicknesses; and, the individual cobalt (Co) layers shown in yellow are of different thicknesses. *See* App. Ex. M, Sinclair Opening Report at ¶¶ 30-38. In the Siemens GMR Application Notes and Tumanski, the two iron (Fe) layers have the same thickness, the four copper (Cu) layers have the same thickness, and the three cobalt (Co) layers have the same thickness. *See* App. Ex. F at WD233105; App. Ex. H at WD012666. They cannot be the same.

Thus, since the Sample GMR Product does not correspond to the GMR products described in the Siemens GMR Application Notes and Tumanski, Western Digital has failed to demonstrate that the tested and analyzed Sample GMR 6 was sold or offered for sale more than

one year prior to the filing date of the patent, and thus LMS is entitled to summary judgment on this defense.

6. Western Digital Also Did Not Prove Anticipation by Clear and Convincing Evidence Under Sections 102(a) and 102(g)

Under sections 102(a) and 102(g)(2), prior knowledge, use or invention will constitute anticipation only if it occurs in this country. 35 U.S.C. § 102. The knowledge or use required by § 102(a) is public knowledge of a complete and operative device. *See Johnson & Johnson*, 436 F. Supp. at 711. As discussed above, since Western Digital has failed to provide clear and convincing evidence of Siemens GMR 6 product being made, sold or offered for sale in the United States at any point prior to the filing of the '988 Patent, it follows that Western Digital has also failed to show prior knowledge, use or invention in the United States before the priority date of the '988 patent.

C. LMS Is Entitled to Summary Judgment on Western Digital's Affirmative Defenses of License and Unclean Hands and Its Withdrawn Defenses

Western Digital has the burden of proof on its affirmative defenses. "The burden of establishing an affirmative defense is on the party raising the defense." *Jazz Photo Corp.*, 264 F.3d at 1102, *abrogated on other grounds by Impression Prod. Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523 (2017). From a review of the record, Western Digital has failed to adduce sufficient evidence to support any of the noted defenses below.

1. License

Western Digital did not adduce any evidence to support a defense that any of its products were licensed by LMS. Western Digital's affirmative defense is threadbare: "On information and belief, [LMS's] claims are barred in whole or in part by an express or implied license. [LMS's] claims are barred to the extent that Western Digital, HGST, and/or any entity whose infringement Defendants allegedly induce or contribute to has an express or implied license to

practice one or more of the patents-in-suit.” Dkt No. 48 at 11. Western Digital does not identify any specific licenses in this Affirmative Defense.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] This testimony is binding on Western Digital. *Univ. of Pittsburgh of Com. Sys. of Higher Educ. v. Varian Med. Sys., Inc.*, Case No. 08-01307, 2011 WL 10604064, at *13 (W.D. Pa. Dec. 30, 2011) (Rule 30(b)(6) deponent’s testimony “constitutes an admission” by the corporation), *aff’d in part sub nom. Univ. of Pittsburgh of Commonwealth Sys. of Higher Educ. v. Varian Med. Sys., Inc.*, 561 F. App’x 934 (Fed. Cir. 2014).

[REDACTED]

[REDACTED]

[REDACTED]

Accordingly, there is an absence of evidence showing that Western Digital is entitled to invoke a license defense, and summary judgment should be granted on that defense.

2. Unclean Hands

Western Digital’s “Unclean Hands” defense is similarly defective. The sum total of Western Digital’s evidence, so far as LMS is aware, is Western Digital’s allegation in its Fifteenth Affirmative Defense: “On information and belief, all claims by [LMS] against Western Digital are barred in whole or in part by the equitable doctrines of unclean hands.” Dkt. No. 48

at 12. LMS is not aware of any evidence that would support this defense. Thus, summary judgment should be granted on this defense.

3. Western Digital's Withdrawn Affirmative Defenses

Western Digital has withdrawn several affirmative defenses that were stated in its Answer to the First Amended Complaint—including defenses of invalidity under 35 U.S.C. § 116 (as included in its Third Affirmative Defense), un-correctability of inventorship (Twelfth Affirmative Defense), lack of standing (Thirteenth Affirmative Defense), and laches (Fourteenth Affirmative Defense). *See* App. Ex. Q, March 30, 2018 email from Lauren Sharkey (withdrawing defenses and noting Supreme Court abrogation of laches defense); App. Ex. R, February 28, 2018 Supplemental Response to Plaintiffs Interrogatory No. 18, at 5 (stating intention to withdraw Third Affirmative Defense). Western Digital has presented no expert testimony on these defenses, and cannot raise a genuine issue of material fact supporting them. Further, since Western Digital plead laches as an affirmative defense, the Supreme Court has definitively held that it is not a defense to a claim of patent infringement. *SCA Hygiene Prod. Aktiebolag v. First Quality Baby Prod., LLC*, 137 S. Ct. 954, 967 (2017) (“Laches cannot be interposed as a defense against damages where the infringement occurred within the period prescribed by § 286.”). Accordingly, Plaintiff respectfully requests entry of summary judgment dismissing these affirmative defenses.

IV. CONCLUSION

For the foregoing reasons, Lambeth moves the Court to enter partial summary judgment in its favor on Western Digital's Third Affirmative Defense as to 35 U.S.C. §§ 102, 103, and 116, and summary judgment on Western Digital's Tenth, Twelfth, Thirteenth, Fourteenth and Fifteenth Affirmative Defenses.

Dated: October 11, 2018

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on the 11th day of October, 2018, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which sent notification to all counsel of record.

BUNSOW DE MORY LLP

/s/ Denise M. De Mory

Denise M. De Mory